Case Study

MANAGING SEASONAL TRAFFIC CONGESTION WITH EFFICIENCY

Replacing manual data collection with crowdsourced and real-time traffic data via visualization platform

Collier County

Overview

Collier County is a region in Florida, U.S.A. Its county seat is East Naples, where the county offices were moved from Everglades City in 1962. Known for its warm weather, visitors flock to the region during winter months. During the first quarter of 2018, the county received 621,000 visitors, which is 200,000 people more than the next highest quarter.

Collier County Traffic Operations

Collier County's Traffic Operations Department is responsible for monitoring and maintaining the county's roadways to promote a safe and efficient transportation system for its citizens and visitors. Collier County Traffic Operations consists of six sectors including InHouse Design Group, Roadway Lighting, Roadway Signing and Marking, Traffic Facilities Locates, Traffic Management Center (TMC), and Traffic Signals. All six of these sections work closely together to provide the most efficient roads for the county.

Company Name: Collier County
Date: January, 2018
Website:
https://www.colliercountyfl.gov/

The Challenge

Collier County Traffic Operations' mission is to provide the best and most efficient roadway networks for its citizens. The county experiences a high fluctuation of seasonal traffic, so it was crucial they collect up-to-date congestion data for the main road segments to prioritize those in need of immediate improvement with low Level of Service.

The Traffic Operations Department wanted to measure travel time to determine roadway capacity, congestion areas, congestion time, and its duration. Also, travel time data could be used to evaluate traffic signal timing to assure high performance of the roads; however, collecting and analyzing travel time data at the county-level is both labor-intensive and time-consuming. Before adopting SMATS' iNode™, the county traffic officials had to drive the desired segments multiple times at different times of the day to collect the required travel time data. This way of collecting data makes it impossible to study longer segments across the county and monitor the roads 24/7. Therefore, Collier County Traffic Operations decided to automate this process to help its staff and collect travel time data more efficiently.

The Solution

Collier County Traffic Operations chose the SMATS data analytics platform, iNode™, with integrated crowdsourced traffic data to easily monitor and analyze live travel time. iNode™ allowed the county traffic officials to capture travel time and speed data of the desired roads without needing to install or maintain any hardware. Finally, iNode™ captured travel time based on the given time schedule.

US 41 Golden Gate Pkwy to Goodlette Frank Rd Southbound
— Feb 12 2020 — Mar 04 2020 — Apr 08 2020

The Results

Since September 2019, the Collier County Traffic Operations Department has been using iNode™. To date, the County has established more than 220 data collection links (segments) using iNode™ to monitor and analyze travel time data throughout different seasons. The data was used to identify the top congested road segments. The data export feature was used to bring the congestion data into the county GIS platform.
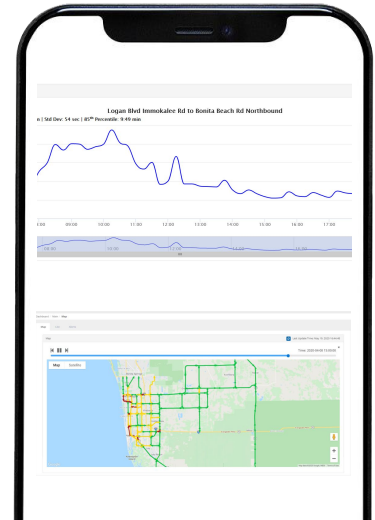
SMATS for Collier County Traffic Operation

SMATS' iNode™ platform provided the county's Traffic Operations Division with the required data and online analysis tools to facilitate traffic officials' work in achieving their traffic operations objectives. Therefore, Collier County Traffic Operations can determine possible alternatives to diminish congestion, and as a result, the county's roads became more efficient.

SMATS Traffic Solutions

SMATS

📞 888 441 5666

✉ info@smats.ca

🌐 www.smatstraffic.com